

## Robotics Service Bus - Bug #927

### Logger randomly crashes

03/05/2012 06:47 PM - J. Wienke

<b>Status:</b>	Resolved	<b>Start date:</b>	03/05/2012
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>	J. Moringen	<b>% Done:</b>	100%
<b>Category:</b>	Common Lisp Tools	<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>			

#### Description

After some time of correct results the logger crashes:

The encoded data

```
0A B9 01 32 0E 2F 6E 61 6F 2F 68 65 61 64 70 6F 73 65 2F 3A 17 2E 72 73 74 2E 76 69 73 69 6F 6E 2E 48 65 61 64 4F 62
```

```
6A 65 63 74 73 4A 5E 0A 2C 0A 02 08 04 12
```

```
0C 0A 06 08 AA 01 10 A1 02 10 3E 18 3E 22 0F 0D 9D 1A 2F C2 15 3D 79 95 C1 1D 00 00 00 00 42 07 50 61 72 74 6E 65 72
```

```
0A 2E 0A 02 08 06 12 13 0A 0D 08 FF FF FF
```

```
FF FF FF FF FF FF 01 10 55 10 30 18 2F 22 0F 0D C6 1C 21 BF 15 B2 80 38 C2 1D 00 00 00 00 42 02 55 4E 7A 16 10 A5 AD
```

```
EF A2 B5 D0 AE 02 18 C8 E6 A0 EE A7 D0 AE
```

```
02 20 00 28 00 E2 06 15 0A 10 15 33 0E 50 A0 31 45 13 82 FC 03 91 BA A7 1B 4A 10 A1 05 10 01 18 00
```

could not be decoded :

After unpacking, the notification

```
#<RSB.PROTOCOL:FRAGMENTED-NOTIFICATION {1007DF1663}>
```

```
[standard-object]
```

Slots with :INSTANCE allocation:

```
NOTIFICATION = #<RSB.PROTOCOL:NOTIFICATION {1007DF16B3}>
```

```
NUM-DATA-PARTS = 1
```

```
DATA-PART = 0
```

could not be converted into an event.

Caused by:

> The wire data

```
> #(10 44 10 2 8 4 18 12 10 6 8 170 1 16 161 2 16 62 24 62 34 15 13 157 26 47 194 21 61 121 149 193 29 0 0 0 0 66 7 80 97  
114 116 110 101 114 10 46 10 2 8 6 18
```

```
> 19 10 13 8 255 255 255 255 255 255 255 255 1 16 85 16 48 24 47 34 15 13 198 28 33 191 21 178 128 56 194 29 0 0 0  
0 66 2 85 78)
```

> (in :|.rst.vision.HeadObjects| wire-schema) could not be converted to domain type :UNDETERMINED

> Caused by:

> > The value 18446744073709551615 is not of type (SIGNED-BYTE 32).

This is somehow repeatable.

This is version 0.6 but I cannot assign bugs to it.

#### Related issues:

Related to Robotics Service Bus - Bug # 937: common lisp logger crash

Rejected

03/09/2012

#### History

#1 - 03/05/2012 06:49 PM - J. Wienke

Btw. running on 64 bit.

#2 - 03/06/2012 11:39 AM - J. Moringen

## Short answer

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This is caused by a bug in the protocol buffer compiler for which I will commit a fix now.

## Long answer

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The data looks like this

```

                                RST.VISION:HEAD-OBJECTS
0: 0A 2C                        .head_objects RST.VISION:HEAD-OBJECT
2: 0A 02                        .tracking_info RST.TRACKING:TRACKING-INFO
4: 08 04 (value: 4)            .id uint32
6: 12 0C                        .region RST.GEOMETRY:BOUNDING-BOX
8: 0A 06                        .top_left RST.MATH:VEC2DINT
10: 08 AA 01                   .x
13: 10 A1 02                   .y
16: 10 3E                       .width
18: 18 3E                       .height
20: 22 0F                       .pose RST.MATH:VEC3DFLOAT
22: 0D 9D 1A 2F C2 15 3D 79 95 C1 1D 00 00 00 00 ...
37: 42 07                       .vfoa_target bytes
39: 50 61 72 74 6E 65 72 (value: "Partner")
46: 0A 2E                        .head_objects RST.VISION:HEAD-OBJECT
48: 0A 02                        .tracking_info RST.TRACKING:TRACKING-INFO
50: 08 06                        .id uint32
52: 12 13                        .region RST.GEOMETRY:BOUNDING-BOX
54: 0A 0D                        .top_left RST.MATH:VEC3DFLOAT
56: 08 FF FF FF FF FF FF FF FF 01 (value: -1) .x
67: 10 55                       .y
69: 10 30                       .width
71: 18 2F                       .height
73: 22 0F
75: 0D C6 1C 21 BF 15 B2 80 38 C2 1D 00 00 00 00 .pose RST.MATH:VEC3DFLOAT
90: 42 02                       .vfoa_target bytes
92: 55 4E (value: "UN")
```

The bug is triggered by the sequence FF FF FF FF FF FF FF FF FF 01 at offset 56 which is the encoding produced by the Vec2DInt.x field

```
message Vec2DInt {
  --> required int32 x = 1 [default = 0]; <--
  required int32 y = 2 [default = 0];
}
```

for the value -1. int32 uses variable width encoding for 32-bit integers. This type produces produces short sequences for small positive integers (i.e. usually a single byte or two bytes) but exceedingly large sequences for negative values. Alternatives are sint32 and sfixed32 (if negative values are actually sound and not the result of a bug).

#3 - 03/06/2012 01:00 PM - J. Moringen

- Status changed from New to Resolved

- % Done changed from 0 to 100

Applied in changeset r3421.